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9		,		
10	BEFORE THE ARIZONA CORI	PORATION COMMISSION		
11	COMMISSIONERS	Arizona Corporation Commission		
12	TOM FORESE, Chairman	DOCKETED		
13	BOB BURNS ANDY TOBIN	OCT 2 6 2018		
14	BOYD DUNN JUSTIN OLSON	BOCKETED EY		
15				
16	IN THE MATTER OF:	DOCKET NO. E-01345A-18-0002		
17	STACEY CHAMPION, et al.,			
18	Complainant,	ARIZONA PUBLIC SERVICE COMPANY'S NOTICE OF FILING		
19	v	RESIDENTIAL BILL IMPACTS		
20	ARIZONA PUBLIC SERVICE COMPANY, an Arizona Public Service Corporation,			
21	Respondent.			
22	Respondent.	×-		
23	As requested by Commissioner Tobin at the evidentiary hearing in this matter,			
24	APS files herewith an analysis of residential bill impacts from May to August 2018.			
25	This analysis compares the base rate bills from 2015 with 2018 for 878,000 residential			
26	customer premises. The analysis demonstrates that the overall class-average bill impact			

for four summer months in 2018 (May-August) was 0.3% as compared to the 4.1%

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1	annual bill impact for 2015 as reflected in Exhibit JEH-1DR. APS's analysis is attached			
2	as Attachment A.			
3	RESPECTFULLY SUBMITTED this 26th day of October 2018.			
4				
5	By:	omas / Mymaus		
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9	-			
10	ORIGINAL and thirteen (13) copies			
11	October 2018, with:			
12	Docket Control ARIZONA CORPORATION COMMISSION 1200 West Washington Street			
13				
14	Thouna, Turzona 05007			
15	26th day of October 2018 to:			
16	Elijah Abinah Ro	bin Mitchell, Interim Director		
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APS Residential Bill Impacts May-August 2018 October 26, 2018

Background

In a proceeding before the Arizona Corporation Commission (Commission) related to the 2016 rate review, APS provided projected bill impact information for residential customers. This information was derived by rebilling the base rate portion of customer's bills using 2015 Test Year billing determinants applied to both the Test Year rates and the new rates that customers were projected to select. The 11.36% class-average revenue reduction from the adjustor transfer was then subtracted from the base rate impacts to derive a net bill impact for each customer. The overall results and the distribution of individual customer results were provided in Attachment JEH-1DR to Jessica Hobbick's Direct Testimony in the Champion v. APS matter.²

Commissioner Tobin requested that APS update this information using the actual rates and bills that customers experienced as of May 2018 to compare actual with projected results. Further, the update was to use the available data at the time of the request, which was May through August 2018, compared with the corresponding months in the 2015 Test Year.

The goal of the analysis was to derive actual impacts, using the customers' actual rate choices and any behavioral response to the new rates, while seeking to isolate the rate case impacts from other factors such as weather, occupancy, changes in the cycle billing days for a particular month, or other factors affecting usage other than behavioral responses to the new rates.

Customers Included in Analysis

This updated analysis compared the bills for the same premises in 2015 and 2018. However, the customer of record living in the premises may have changed over that time period as may have the occupancy of the premises. The updated analysis started with the 951,000 residential customers from the initial analysis in Ms. Hobbick's Direct Testimony and excluded (1) customers with distributed generation, (2) customers that did not have billing information for each of the 8 relevant summer months, and (3) customers with monthly bills with fewer than 15 billing days or more than 35 billing days. After these exclusions, approximately 878,000 customers were included in the analysis.

Billing Determinants

As stated above, the study sought to assess and isolate the actual rate case bill impacts in 2018 versus 2015. An inspection of the data showed that many homes had changes in their monthly usage or billed days between 2015 and 2018. In some cases these changes were modest; in other cases they were significant. Therefore, adjustments were made to the 2018 billing information, which made the comparison more consistent, but still reflected customer responses to the new rates in terms of billing demand and on-peak and off-peak usage.

The adjustments were as follows: (1) the basic service charge component of the 2018 bill was adjusted to reflect the same billing days for the corresponding month in 2015, and (2)

¹ Stacey Champion, et al. v. Arizona Public Service Company, Docket No. E-01345A-18-0002.

² Attached to the Direct Testimony of APS witness Jessica Hobbick.

the bill components that were based on kWh charges for 2018 were adjusted to reflect the same total kWh consumption for the corresponding month in 2015; however, the ratios of on-peak and off-peak kWh usage were not adjusted.³ The demand portion of the bill was left unchanged, except where the 2015 monthly kWh was zero, in which case the 2018 demand portion of the bill was set to zero. An illustrative example of these changes is provided in Table 1.

Table 1Illustrative Example of Adjustments to Billed days and Total kWh

Adjustment to Billed Days

	May 2015 Billed Days	May 2018 Billed Days	May 2018 Adjustment to Billed Days	May 2018 Adjustment to Basic Service Charge
Customer 1	20	25	-5 days	-5 days X daily BSC
Customer 2	30	20	10 days	10 days X daily BSC

Adjustment to Billed kWh (non-TOU rates)

	May 2015 Total kWh	May 2018 Total kWh	May 2018 Adjustment to Billed kWh	May 2018 Adjustment to Base kWh Charges (Non-TOU Rates)
Customer 1	1,000	1,250	-250	-250 kWh X Rate
Customer 2	900	600	300	300 kWh X Rate

³ However, if the total kWh usage was zero for a month in 2018, but a positive amount in 2015, the on-peak and off-peak usage ratios for 2018 were derived from class average information.

(Table 1 continued)

Adjustment to Billed kWh (TOU rates)

	May 2015 Total kWh	May 2018 Total kWh	May 2018 Adjustment to Billed kWh	May 2018 Adjustment to Base kWh Charges (TOU Rates)
Customer 1	1,000	1,250	-250/1,250 = -20%	-20% X kWh X Rate
Customer 2	900	600	300/600 = 50%	50% X kWh X Rate

Base Rates, Adjustor Rates, and Bill Comparisons

This updated analysis was conducted in two steps, similar to the initial analysis. First, the customer's actual base rate portion of the bill for 2015 was compared with the base rate portion of the bill for 2018, with the adjustments described above. This comparison was made for each month, May through August, and for a total of all four months. Second, the same class average bill reduction from the adjustor rate transfer used in the original analysis (11.36%) was subtracted from each customer's bill impact from the first step to derive the net bill impact from the rate case. This makes the updated analysis more consistent with Attachment JEH-1DR.

Results

The results of the analysis are provided in Table 2. The overall class-average bill impact for the four summer months was 0.3% compared with the 4.1% annual bill increase from the initial analysis and the 4.54% projected annual increase from the rate case.

Table 2

Distribution of Customer Bill Impacts (net of adjustor Transfers)

Initial Bill Impact Analysis JEH-1DR Annual Projection

Avg % Impact1 Customers Customers 0 0.0% 0 0.0% 0 0.0% _ _ 0 0.0% 0.0% 1 -81.3% 0 0.0% -75.5% 0 0.0% 3 0.0% -69.4% 0.0% -63.3% 4 0.0% 7 -58.6% 24 0.0% -54.5% 0.0% -48.3% 53 151 0.0% -43.4% 468 0.0% -38.4% 1,338 0.1% -33.6% 3,142 0.3% -28.6% 0.7% -23.6% 7,036 14,855 1.6% -18.6% 3.1% -13.6% 29,561 6.2% -8.6% 59,199 102,407 10.8% -3.7%

Updated Bill Impact Analysis May-August 2018

		%
5224 1920	%	Impact
Customers	Customers	Range ²
2	0.006	<-
3	0.0%	100%
):5	0.0%	-100%
1	0.0%	-95%
7 <u>2</u>	0.0%	-90%
1 -	0.0%	-85%
2	0.0%	-80%
8	0.0%	-75%
16	0.0%	-70%
56	0.0%	-65%
140	0.0%	-60%
396	0.0%	-55%
642	0.1%	-50%
1,249	0.1%	-45%
2,072	0.2%	-40%
3,915	0.4%	-35%
8,519	1.0%	-30%
20,241	2.3%	-25%
50,677	5.8%	-20%
83,186	9.5%	-15%
99,529	11.3%	-10%
105,442	12.0%	-5%

(Table 2 Continued)

Initial Bill Impact Analysis JEH-1DR Annual Projection

Customers	% Customers	Avg % Iimpact ¹
161,619	17.0%	1.3%
265,499	27.9%	6.3%
198,210	20.8%	10.8%
68,991	7.3%	15.8%
25,587	2.7%	20.7%
7,689	0.8%	25.7%
2,641	0.3%	30.7%
1,220	0.1%	36.0%
578	0.1%	40.9%
283	0.0%	46.0%
177	0.0%	50.8%
103	0.0%	56.1%
75	0.0%	61.1%
50	0.0%	65.6%
34	0.0%	71.3%
15	0.0%	76.1%
13	0.0%	80.7%
4	0.0%	85.3%
6	0.0%	95.3%
0	0.0%	-

951,043 100.0% 4.1%

Note 1 Bin % impact represents average value.

Updated Bill Impact Analysis May-August 2018

		%
	%	Impact
Customers	Customers	Range ²
132,349	15.1%	5%
187,127	21.3%	10%
81,788	9.3%	15%
42,244	4.8%	20%
21,391	2.4%	25%
13,010	1.5%	30%
7,839	0.9%	35%
5,009	0.6%	40%
2,482	0.3%	45%
1,642	0.2%	50%
1,182	0.1%	55%
883	0.1%	60%
964	0.1%	65%
418	0.0%	70%
363	0.0%	75%
308	0.0%	80%
272	0.0%	85%
210	0.0%	90%
155	0.0%	95%
190	0.0%	100%
2,183	0.2%	>100%

878,103 100.0% 0.3%

Note 2 Bin % impact represents top end of range. E.g. 10% bin reflects 5.01% to 10% impact.

Comments

The updated bill impact analysis reflects actual rate choices for customers as of May 2018 and also reflects customer's responses to the rates in terms of actual billing demand and on-peak and off-peak usage. As stated above, adjustments were made to the billed days and total monthly kWh usage information in order to better reflect the bill impacts caused by the new rates rather than by other factors such as weather, changes in occupants, new appliances, home remodels, and partial or total vacancies. If these adjustments had not been made the overall bill impacts would have been <u>lower</u> than the adjusted version presented in this report.

The updated analysis only covers four summer months, rather than all twelve months. Thus, it is not indicative of or an appropriate comparison to the 4.54%., which represents an average annual impact. This distinction is important because APS's seasonal rates, usage levels and patterns are different in summer months versus winter months for residential customers. In addition, the summer rates were generally increased less than the winter rates in order to help mitigate higher summer bills.